

**REMARKS**

Applicant respectfully requests reconsideration of the present application.

I. Specification

The cross-reference to related applications has been updated to reflect the status of the applications in the present family. The information was taken from both PAIR and the present record and placed into words. No new claims for priority have been added.

II. General

The Examiner is respectfully asked to indicate on the Office Action Summary (Form PTOL 326) whether or not the drawings have been accepted.

III. Information Disclosure Statement

Several documents (numbered 1-6) were crossed off the information disclosure statement. Office action, para. 8. A new IDS, form SB/08 and documents 1-6 are filed with this reply.

In addition to documents 1-6, the following documents, which were cited in the record of the parent application, are cited on, but not submitted with, the present IDS:

4649037	March 1987	Marsh et al.
5358695	October 1994	Helble et al.
5788738	August 1998	Pirzada et al.
5984997	November 1999	Bickmore et al.
6165247	December 2000	Kodas et al.
6344271	February 2002	Yadav et al.

CRC Handbook of Chemistry and Physics, 54<sup>th</sup> edition, 1973, pp. F45-F-51.

International Search Report, PCT/US02/03636 (Dec. 3, 2002).

IV. Disposition of the claims

Claims 1-20 are pending. Claims 1-15 and 19 stand rejected. Claims 16-18 and 20 are withdrawn.

Claims 1 and 4-5 are amended as noted below.

This amendment adds, changes and/or deletes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

V. Restriction

The election of group I is affirmed, although the circumstances surrounding the election are unknown. Cf. Office action, paras. 1-3. The withdrawn claims were not canceled so as to remind Applicant to consider filing a divisional application claiming the subject matter of those claims at a later time.

VI. 35 USC § 112, para. 2 Rejection

Claims 1 and 4-5 were rejected as indefinite for reciting a plug flow index of a given value. Office action, para. 4. According to the rejection, the specification at page 16 recites, e.g., “preferably equals 5,” and claim 1 recites “more than 5.” Office action, para. 4. The Examiner’s comments are appreciated, and the rejected claims are amended not to narrow the claims but to clarify the meaning.

The formula on page 16 reads:

$$UL/D > \beta$$

wherein U is the axial velocity; L is the axial length of the reactor; D is the axial dispersion coefficient; and  $\beta$  is the plug flow index (preferably equals 5, more preferably equals 50, and most preferably equals 500). Plugging numbers for  $\beta$  into the equation results in the following:

$$UL/D > 5$$

$$UL/D > 50$$

$$UL/D > 500$$

In words, the product of the axial velocity (U); the axial length of the reactor (L); and the inverse of the axial dispersion coefficient (1/D) is greater than 5, 50, or 500. Corresponding amendments were made to claims 1 and 4-5 as follows:

1. (Currently Amended) A method for making nanoscale powders comprising: ... treating the precursor mixture with at least one precipitating agent in a flow reactor system such that a product value of the axial velocity, the axial length and the inverse of the axial dispersion coefficient in the flow reactor system ~~yield a plug flow index of~~ is more than 5; ....
4. (Currently Amended) The method of claim 1 wherein the ~~flow reactor system has a plug flow index~~ product value is greater than 50.
5. (Currently Amended) The method of claim 1 wherein the ~~flow reactor system has a plug flow index~~ product value is greater than 500.

It is submitted that support is found in the specification at page 16, as just discussed. No new matter has been added. The rejection should be avoided.

#### VII. 35 USC § 103 Rejection

Claims 1-15 and 19 were rejected as obvious over Moser (U.S. Pat. No. 5,417,956).  
Office action, para. 6. According to the rejection, Moser fails to suggest the recited *product*

*value*. Office action, p. 4, ll. 4-7. Yet the rejection urged that no “patentable distinction” exists because “it would have been a trivial matter for one of ordinary skill in the art to select a pressure which results in the [*product value*].” Office action, p. 4, subpara. b.

Yet Moser’s teachings are too vague to determine the *product value*, let alone the pressure gradients between parts of the reactor. Moser teaches that “thermal calcining, which is normally carried out as a separate step in a co-precipitation process, occurs in situ when the pressures are relatively high of from about 18,000 to 50,000 psig.” Moser, col. 2, ll. 8-13. In other words, Moser’s calcining is a result of these pressures. But Moser is absolutely silent regarding the *product value*, let alone the parameters of the device that would allow one to determine the *product value*.

Even if it would have been a trivial matter ... to select a pressure, the required motivation cannot be established by noting the level of ordinary skill in the art. MPEP § 2143.01. Nor can it be established from the mere fact that one of ordinary skill can combine the teachings in a way needed to possibly reach the claimed invention. MPEP § 2143.01.

In fact, a relevant inquiry is the desirability for making the claim invention, not something that approximates it. That is why the examiner has the initial burden to provide the suggestion of the desirability for one of ordinary skill in the art to carry out the claimed process, and once done, have a reasonable expectation of success. MPEP § 2142. Such as not been the case here for the *product value*.

Nor has Moser suggested, it is submitted, washing *the precipitated nanoscale powders ... with a second metal containing substance*. Silence as to a particular embodiment cannot amount to a motivation to make that embodiment, let alone a reasonable expectation of success to do what the present inventors have done. Thus, Moser’s teachings cannot support the present rejection, which should be withdrawn.

**Conclusion**

The present application is believed in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

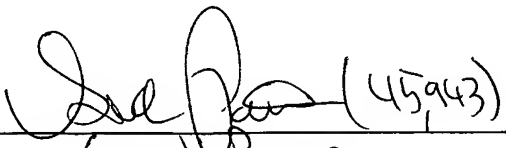
The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. § 1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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